

In the claims:

Please amend the claims as follows:



1. (Previously Amended) A DC motor comprising:
 - a plurality of windings;
 - at least one microelectronic mechanical system (MEMS) relay positioned in the motor to activate in the presence of a magnetic field, where each relay includes:
 - a first substrate formed from a nonconductive or semiconductive material;
 - a magnetic actuation plate micro-machined on said first substrate, said magnetic actuation plate having a first conductive surface, said magnetic actuation plate comprising one or more anchors in direct contact with the first substrate, where said magnetic actuation plate and said one or more anchors are formed of permalloy material; and
 - a second substrate provided adjacent to said magnetic actuation plate, said second substrate having a nonconductive surface and a second conductive surface,
 - where said first and second conductive surfaces define at least two switching states, including an open state in which the conductive surfaces are physically separated from each other, and a closed state in which the conductive surfaces physically contact each other,
 - where said magnetic actuation plate, in the presence of a magnetic field, creates an actuation force that causes the electrically conductive surfaces to switch from one of the switching states to another of the switching states, and
 - where each relay is connected electrically to at least one corresponding winding and to power; and

a magnetic rotor having at least one pole positioned to induce a magnetic field in each MEMS relay when passing by the relay.

2. (Original) The motor of claim 1, wherein the windings are arranged in pairs of primary and secondary windings and each relay connects to a corresponding one of the pairs of windings.

3. (Original) The motor of claim 2, wherein the secondary windings all connect to a common node and each of the primary windings connects to the corresponding relay.

4. (Original) The motor of claim 1, wherein the motor is a four-pole, three-phase motor.

5. (Original) The motor of claim 4, wherein the motor includes three relays separated from each other by approximately 120°.

6. - 19. (Cancelled)

20. (Previously Added) The motor of claim 1, wherein the relay is magnetically switched between the first and the second switching states without an electrical biasing current or voltage.

21. (Currently Amended) A spaceborne system, the spaceborne system comprising a DC motor micromachined mechanical system (MEMS) commutation circuit, the DC motor micromachined mechanical system (MEMS) commutation circuit comprising:

a ~~plurity~~ plurality of windings wired into a star configuration;

a ~~plurity~~ plurality of micromachined mechanical system ~~(MEMs)~~ switches each electrically connected to one part of said windings, wherein each switch is magnetically switched by a magnetic field without an electrical biasing current or biasing voltage to turn electrical power on or off in at least one of the windings; and

a rotating magnetic rotor having at least one pole to direct the magnetic field in at least one of the switches when passing by the switch.

22. (Currently Amended) The DC motor micromachined mechanical system (MEMs) commutation circuit ~~motor~~ as in claim 21, wherein said switch comprises ~~is~~ a micromachined magnetostatic switch.

23. (Currently Amended) The spaceborne system ~~motor~~ as in claim 21, wherein the number of switches corresponds to the number of motor phases.

24. (Cancelled)

25. (Currently Amended) The spaceborne system ~~motor~~ as in claim 21 ~~24~~, wherein said switch is a relay, wherein the relay ~~includes~~ comprises:

a first and second conductive surface to define at least two switching states, including an open state in which the conductive surfaces are physically separated from each other, and a closed state in which the conductive

surfaces physically contact each other to permit a current flow between the two conductive surfaces.

26. (Currently Amended) A DC motor for spaceborne applications comprising a commutation circuit, the communication circuit comprising:

a ~~plurity~~ plurality of windings, wherein the plurality of windings comprise three pairs of primary and secondary windings wired into a star configuration;

a micromachined mechanical system (MEMs) relay electrically connected to one part of said windings for a motor phase, wherein the relay is actuated in response to a magnetic field and operates without biasing current or biasing voltage, wherein the relay comprises a first and second conductive surface to define at least two switching states, including an open state in which the conductive surfaces are physically separated from each other, and a closed state in which the conductive surfaces physically contact each other to permit a current flow between the two conductive surfaces; and

a rotating magnetic rotor having at least one pole positioned to direct the magnetic field in the relay when passing by the relay.

27. (Currently Amended) The DC motor as in claim 26, wherein the number of switches corresponds to the number of motor phases.

28. (Cancelled)

29. (Currently Amended) A method for applying power to a DC motor in spaceborne applications, the method comprising: The motor as in claim 28, wherein the

actuating a micromachined mechanical system (MEMs) relay actuates in a magnetic field, wherein a rotating magnetic rotor induces the magnetic field, wherein the relay is magnetically actuated without an electrical biasing current or voltage; and

closing the micromachined mechanical system (MEMs) relay to conduct current through a DC motor commutation circuit, wherein each the DC motor commutation circuit comprises includes:

a power source, the three pairs of primary and secondary windings, the three micromachined mechanical system (MEMs) relays, and a ground terminal.

30. (Currently Amended) A method for removing power from a DC motor in spaceborne applications, the method comprising: The motor as in claim 28, wherein the

opening a micromachined mechanical system (MEMs) relay opens when the a magnetic field is removed from the micromachined mechanical system (MEMs) relay; and to

terminating current conduction through a DC motor commutation circuit when the micromachined mechanical system (MEMs) relay opens, wherein the each DC motor commutation circuit comprises includes:

a power source, the a plurality of windings wired into a star configuration, the one semiconductor device, and a ground terminal, wherein the one semiconductor device is a micromachined mechanical system (MEMs) relay.